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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,759	07/21/2006	Rudolf Hirschmanner	WMB-12405	3936

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EXAMINER	
NGUYEN, HOANG M	
ART UNIT	PAPER NUMBER
3748	

MAIL DATE	DELIVERY MODE
05/01/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/584,759	HIRSCHMANNER, RUDOLF	
	Examiner	Art Unit	
	Hoang M. Nguyen	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Applicant's amendment dated April 8, 2009, has been fully considered.

Applicant amended claim 25 and its dependent claims to include the "compressing the fluid while giving off heat". These claims are now rejected under 103 rejections along with claim 16 and its dependent claims.

Applicant argued Laing does not disclose the "compressing the fluid while giving off heat". Please note in the rejection of claim 1, Kronogard clearly discloses a compressor 15 inside the cooler to give off heat.

Applicant argued Laing does not disclose the heat exchanger 11c/21 being in thermal contact with an ambient environment. The Examiner disagrees. Both heater 1 and cooler 36 of Laing are in contact with ambient environment, especially the condenser 36 uses ambient air for heat transfer purpose. After the combination of Laing and Kronogard is made, the turbine is clearly in thermal contact with ambient environment as claimed.

The dependent claims should stand and fall with the independent claims

Claims 25, 27-29, 32-33, are rejected under 35 U.S.C. 102(b) as being anticipated by US 4004426 (Laing).

Laing discloses a thermal prime mover comprising two rotating heat exchangers (1, 36) consisting a heater 1 and a cooler 36, each said heat exchanger comprising many tubes 31, 121, with gas passages, many gas chambers 15 inside each said heat exchanger. Please note ambient air is used in both heat exchangers, especially the condenser 36 uses ambient air for heat transfer purpose. As noted above, Laing discloses in figure 1 heater 1 and cooler 26 each having many rows of heat exchanging tubes 31, 121 which can be considered as the annular chambers as claimed. Figures 3a-3d clearly discloses heat exchangers 15 and 312 being surrounded by said tubes 31, 121. Both the heat exchangers 15, 312, and annular chambers 31, 121 are rotating.

Regarding claims 27-28, valves 154 controlling the pressures inside the heat exchanger.

Regarding claims 29, 32-33, there are more than 4 tubes inside said heat exchangers.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16-25, 27-29, 32-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4004426 (Laing) in view of U.S. 3956899 (Kronogard). Laing discloses a thermal prime mover comprising two rotating heat exchangers (1, 36)

consisting a heater 1 and a cooler 36, each said heat exchanger comprising many tubes 31, 121, with gas passages, many gas chambers 15 inside each said heat exchanger. Please note ambient air is used in both heat exchangers, especially the condenser 36 uses ambient air for heat transfer purpose. As noted above, Laing discloses in figure 1 heater 1 and cooler 26 each having many rows of heat exchanging tubes 31, 121 which can be considered as the annular chambers as claimed. Figures 3a-3d clearly discloses heat exchangers 15 and 312 being surrounded by said tubes 31, 121. Both the heat exchangers 15, 312, and annular chambers 31, 121 are rotating; regarding claims 27-28, valves 154 controlling the pressures inside the heat exchanger; regarding claims 29, 32-33, there are more than 4 tubes inside said heat exchangers. Laing does not disclose the steps of compressing the medium while giving off heat, expanding the medium, and then guiding the medium through a second heat exchanger. Kronogard is relied upon to disclose a gas turbine system comprising a compressor 15 inside the cooler to compress gas while giving off heat, expanding said medium in turbine stages 13-14 inside other heat exchangers 18, 19. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide gas turbine system in place of the fluid-driven engine of Laing as taught by Kronogard for the purpose of performing the same functions: generating mechanical energy. Regarding claims 20-22, it would have been obvious for a person having skills in the art to elect different temperatures for the purpose of generating appropriate power output.

Claim 26 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4004426 (Laing) in view of U.S. 4781241 (Misage et al). Laing discloses all the claimed subject matter as set forth above in the rejection of claim 25, but does not disclose different gases are used in the heat exchangers. Misage et al is relied upon to disclose a heat exchangers using different gases in the heat exchanger tubes (note column 3, lines 55-68). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use different gases in the heat exchangers of Laing as taught by Misage et al for the purpose of achieving appropriate heat exchange rates.

Claim 30 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4004426 (Laing) in view of DE 3807783. Laing discloses all the claimed subject matter as set forth above in the rejection of claim 25, but does not disclose the fluid is going through the shaft. DE 3807783 is relied upon to disclose it's well known to direct fluid through a shaft 27 (see figure 1). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to direct fluid through the shaft of Laing as taught by DE 3807783 for the purpose of achieving a compact structure.

Claim 31 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4004426 (Laing) in view of US 6491141 (Severinsson). Laing discloses all the claimed subject matter as set forth above in the rejection of claim 25, but does not disclose the magnet lock of the housing. Severinsson teaches it's well known in the art to use magnet lock 13 for a housing. It would have been obvious at the time the invention was

made to a person having ordinary skill in the art to provide a magnet lock in Laing as taught by Severinsson for the purpose of locking the housing if needed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Nguyen whose telephone number is (571) 272-4861. The examiner can normally be reached on Tuesday--Friday from 12:30 AM to 10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hoang M Nguyen/
Primary Examiner, Art Unit 3748

HOANG NGUYEN
PRIMARY EXAMINER
ART UNIT 3748

Hoang Minh Nguyen
5/1/2009